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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/766,303

01/28/2004

Gregg W. Landry

ISR-018-US

9362

24390

7590

09/13/2004

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EXAMINER

IP, SHIK LUEN PAUL

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,303

Applicant(s)

LANDRY ET AL.

Examiner

Paul Ip

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/28/04</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 6-9, 26, 27, 32-34, and 37-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawakami et al (5,613,261).

With respect to the claims, the patent to Kawakami et al discloses a cleaner comprising a drive system (see figures 1 and 2), a controller 20, a debris sensor 19, and a processor (CPU, col. 3 lines 12-57). See figure 6 for the pattern of movement.

3. Claims 13-16, 17-31, and 44-62 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Crotzer (5,910,700), WO 95/30887, Schallig et al (6,076,227), and Japanese Patent 6-38912.

With respect to the claims, Crotzer, WO 95/30887, Schallig et al, and Japanese Patent 6-38912 disclose cleaning apparatus comprising a cleaning pathway, a piezoelectric sensor and a processor to change an operative mode of the cleaning apparatus.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 4, 10, 11, 35, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al (5,613,261) in view of Hoekstra et al (5,542,146 or 5,515,572).

The claims further require spaced apart sensing elements. However, the patents to Hoekstra et al disclose vacuum cleaner control systems comprising spaced apart dust sensors. Since Kawakami et al disclose at column 4 line 42 a linear sensor instead of an individual sensor array for more than one sensor, it would have been obvious to one of ordinary skill in the art to provide Kawakami et al with the spaced apart dust sensors as taught or suggested by Hoekstra et al.

7. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al (5,613,261) in view of Hoekstra et al (5,515,572 or 5,542,146) taken with Schalling et al (6,076,227), WO 95/30887, Crotzer (5,910,700), or Japanese Patent 6-38912.

Claims 5 and 12 further recite a piezoelectric dust sensor. However, Schalling et al, WO 95/30887, Crotzer, and JP 6-38912 teach and suggest piezoelectric dust sensors. Since the alternative use of optical or piezoelectric dust sensor for cleaner is taught or suggested by these references, it would have been obvious to provide Kawakami et al with the piezoelectric dust sensor as taught or suggested by these references.

Citation of Pertinent References

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patents to Nishimura et al (6,437,465, 6,323,570, and 6,400,048), Abe et al (5,233,682), Hoekstra et al (5,507,067), Moro et al (5,216,777 and 5,251,358), Imamura et al (5,815,884 and 6,055,702), and Kurz (5,539,953) disclose vacuum cleaners comprising a dust sensor for detecting the dust and a controller for controlling the motor speed of the cleaner.

The patents to Soupert et al (5,341,540), Kleiner et al (5,935,179), Bartsch et al (6,459,955), JP 2003-310489, and Bisset et al (6,671,592) disclose mobile robot cleaners.

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Customer Services Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Ip whose telephone number is (571)-272-1941. The examiner can normally be reached on Monday to Friday from 6:30 a.m. to 3:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on (571)-272-1207. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Ip
Primary Examiner
Art Unit 2837